



Oregon

Kate Brown, Governor

Department of Environmental Quality

Northwest Region Portland Office

2020 SW 4th Avenue, Suite 400

Portland, OR 97201-4987

(503) 229-5263

FAX (503) 229-6945

TTY (503) 229-5471

April 28, 2015

Also Sent Via E-mail

Mr. Robert J. Wyatt
NW Natural
220 N.W. Second Avenue
Portland, OR 97209

**Re: Alluvium Water-Bearing Zone Hydraulic Control and Containment System, Phase 1 Testing Summary Report - Shoreline Segments 1 and 2, NW Natural Property and the Northern Portion of the Siltronic Corporation Property
Portland, Oregon
ECSI Nos. 84 and 183**

Dear Bob:

The Department of Environmental Quality (DEQ) reviewed the “Groundwater Source Control Phase 1 Testing Data Summary Report, NW Natural Gasco Site” dated January 30, 2015 (Phase 1 Summary Report). The Phase 1 Summary Report presents and evaluates the results of the Alluvium water-bearing zone (WBZ) hydraulic control and containment (HC&C) system Phase 1 Step 6 test, including comparing the test data to data collection objectives identified in the Final Test Plan¹ and recommending HC&C system operational parameters for the Phase 2 testing period. Anchor QEA, LLC prepared the Phase 1 Summary Report for NW Natural.

The primary purpose of this letter is to inform NW Natural that DEQ:

- Considers the Phase 1 Summary Report to be incomplete; and
- Requests that NW Natural prepare a supplement to the document as indicated below.

In addition to DEQ, the U.S. Environmental Protection Agency (EPA) reviewed the Phase 1 Summary Report. EPA concurs with DEQ’s comments provided in this letter and our request for the supplement. EPA has also provided comments which are attached to this letter.

COMMENTS

Phase 1 Testing Report Content

The HC&C system is being tested in two phases. Success of the long-term Phase 2 test is dependent on the HC&C system achieving the Phase 1 testing data collection objectives listed in Section 2.2 of the Final Test Plan over time and with changing groundwater and river stage conditions. A primary objective of Phase 1 testing is to select operational parameters for Phase 2 and ultimately have a basis for making informed decisions regarding long-term operations.

¹ Anchor QEA, LLC, 2013, “Final Groundwater Source Control Extraction System Test Plan – NW Natural Gasco Site,” November (received November 13, 2013), a document prepared for NW Natural.

Based on DEQ's review, the Phase 1 Summary Report does not provide a basis for the recommended Phase 2 operational parameters. Recommendations for Phase 2 testing identify extraction well flow rates associated with pump settings (constant discharge or water-level controlled), but it is not clear to DEQ how the parameters were selected as they appear to be unrelated to the Phase 1 Step 6 test and/or previous test results.

The Phase 1 tests have been run with the purpose of evaluating HC&C system performance during various groundwater and river stage conditions. The Phase 1 Summary Report compiles water level data recorded during the Phase 1 Step 6 test and bases the overall evaluation of the Phase 1 data collection objectives on this test. Consequently, the report only evaluates the data collection objectives in the context of a single set of groundwater and river stage conditions (i.e., relatively low groundwater levels and low river stage). As indicated in our previous comments letters dated January 29, 2014 and May 20, 2014, the basis for moving forward with the long-term Phase 2 test is a detailed and thorough demonstration of how the data collection objectives will be met, or can be met under the proposed Phase 2 operational parameters given the anticipated groundwater and river stage conditions and in the context of the information developed from the Phase 1 tests.

DEQ acknowledges that the Phase 2 testing recommendations can and will be assessed during the initial 60-day testing period approved by DEQ. However, before longer term Phase 2 testing is initiated DEQ believes it is important to identify constraints for operating the system due to changing groundwater levels and river stage likely to be encountered during Phase 2 testing and beyond. Currently, the Phase 1 Summary Report does not provide this information. For example, the report does not discuss the elements of the HC&C system and performance monitoring network that are most sensitive (or insensitive) to changes in groundwater levels, river stage, and/or operations; where achieving data collection objectives may be difficult to maintain seasonally; and how and where adjustments to the system will be made to maintain effectiveness.

Document Supplement

Consistent with previous Phase 1 test reports, water level data are organized and presented according to hydrostratigraphic unit and location. Based on DEQ's review, discussions and data presentations continue to focus on differences in water level elevations between different hydrostratigraphic units and the river, and between adjacent hydrostratigraphic units. However, the data collection objectives are based on comparisons of water level elevations between the river and HC&C system installations based on other factors.

DEQ requests that NW Natural prepare a supplement to the Phase 1 Testing Report that selects additional Phase 1 testing data representative of a range of groundwater and river stage conditions (e.g., relatively high groundwater and river stage; relatively high groundwater and low river stage). As requested previously, NW Natural should evaluate the data in terms of the data collection objectives, including the design objective of the upper Alluvium WBZ

Bob Wyatt
April 28, 2015
Page 3 of 3

installations in the portion of Segment 1 where DNAPL occurs; the installation type (control wells); the hydraulic efficiency of the material in which installations are constructed (minimal, low, or high); and the locations of installations at the margins of the network (e.g., installations in the deep lower Alluvium WBZ). Data evaluations should utilize information from Phase 1 steps 1 through 6 as needed to support interpretations, conclusions, and Phase 2 testing recommendations.

NEXT STEPS

The Phase 1 Summary Report Supplement should be submitted to DEQ for review on or before Friday June 15, 2015. As indicated above, DEQ's approval of the supplement is needed before NW Natural moves from the approved 60-day Phase 2 testing period currently projected to end July 14, 2015, into the longer period of Phase 2 testing. Given the date for submitting the supplement and the current Phase 2 testing schedule, DEQ recommends that a meeting be scheduled as soon as practicable to further discuss the contents of the supplement.

Please contact me with questions regarding this letter.

Sincerely,

Dana Bayuk
Project Manager
Northwest Region Cleanup Section

Attachment: EPA comments

Cc: Patty Dost, Pearl Legal Group
John Edwards, Anchor
Ben Hung, Anchor
John Renda, Anchor
Rob Ede, Hahn & Associates
William Earle, Davis Rothwell Earle and Xochihua
Ilene Gaekwad, Davis Rothwell Earle and Xochihua
James Peale, MFA
Sean Sheldrake, EPA
Rich Muza, EPA
Lance Peterson, CDM Smith
Scott Coffey, CDM Smith
Henning Larsen, NWR/Cleanup & Tanks Section
ECSI No. 84 File
ECSI No. 183 File